

Dear Mr. Karney:

We are very encouraged by the DOE's Proposed Category "A" Additions – Outdoor Area & Parking Garage luminaires. Several people in our company have reviewed the criteria and assessment methodology. We would like to offer comments related to two areas:

1. The Fitted Target Efficacy (FTE) performance qualification
2. Parking garage/canopy luminaires.

FTE

Although, we are supportive of FTE approach, that in part is directed at quantifying an acceptable level of distribution that will have a high probability of reasonable application level performance (lighting quality, target efficacy, etc.), we have some concerns.

For Example:

For roadway luminaires with highly optimized street side performance, backlight contributions of a form that do not enhance the rectangularity of the overall distribution many times results in an FTE rating that falls outside of the requirements for a "pass rating". From the standpoint of practical optical design, optimizing asymmetric roadway distributions for "high rectangularity of distribution" on both the house side and the street side will typically compromise the opportunity to provide for best overall performance. In our experience, modifying the optical design system to provide for a more rectangular backlight component (resulting in a higher FTE rating), invariably causes a disproportionately unacceptable decrease in street side performance.

Depending on the lighting application, the non rectangular backlight distribution can prove very useful in many practical lighting designs. For example: pedestrian lighting, applications with multiple fixtures per pole, etc. Incorporating methods for cutting off the backlight component (i.e. shielding, etc.), without effecting the street side distribution, will favorably impact the FTE rating while lowering the total luminaire efficacy (sometimes appreciably).

We recommend that consideration be given to lowering the FTE limits in addition to incorporating a minimum threshold(s) on total luminaire efficacy. Additionally, we recommend incorporating luminaire level lumen depreciation limits, once the appropriate luminaire level standards exist.

Parking garage/canopy luminaires

We recommend that consideration be given to adding a provision for parking structure luminaires, with integrated 2-level occupancy control, in the form of a "composite total luminaire efficacy minimum". The composite efficacy would be calculated based on a

conservative assumption on the percent of occupancy for a “highly occupied” parking facility. This would allow luminaire manufacturers to provide products with a very high “low mode” efficacy and a reasonably high “high mode” efficacy. The calculated composite total luminaire efficacy could substantially exceed the 70 lm/W Minimum Luminaire Efficacy requirements. Additionally, the 2-level product could provide for greater overall energy savings at a lower initial cost.

Thank you for the opportunity to comment

Sincerely,

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